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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,570	02/24/2000	Edward W. Conrad	(BU999-152)	5806

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EXAMINER
LU, TOM Y

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/512,570	Applicant(s) CONRAD ET AL.	
	Examiner Tom Y Lu	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoyama (U.S. Patent No. 5,398,292).

   a. As applied to Claim 1, which is representative of claims 6 and 11, Aoyama discloses selecting intensity vs. pixel information in at least one direction in the vicinity of an edge of the image shape (Aoyama at column 4, lines 25-27, discloses there are n edge detecting masks 22a through 22n, which corresponds to the claimed "at least one direction in the vicinity of an edge of the image shape." Aoyama at column 4, lines 27-33, discloses the mask M contains sum-of-products, which Aoyama later at column 4, line 43 defines as intensities, which correspond to the claimed "intensity vs. pixel information"); recognizing scans with sufficient contrast as containing edge information (Aoyama at column 4, lines 29-32, teaches a sum-of-product operation is performed between these weighting elements and image data indicative of the brightness or tint of respective pixels at corresponding positions of the respective weighting elements, such process examiner interprets as recognizing scans with sufficient contrast as containing edge information. Note weighting elements and image data indicative of the brightness correspond to the claimed "edge information"); subjecting acceptable scans to an edge detection algorithm (Aoyama at

column 4, lines 36-38, discloses the edge to be detected is placed at the center of the mask along its longitudinal direction, which is a form of subjecting acceptable scans to an edge detection algorithm); detecting the edge location (Aoyama at column 4, lines 65-68, and column 5, lines 1-8, teaches finding which mask outputs the maximum intensity among others. In doing so, system will be able to find the edge location); and generating a locus of points that define the two-dimensional shape of the image from the detected edge values (Aoyama at column 5, lines 9-13, shows the true direction of the edge is then obtained by an interpolation calculation with reference to the mask directions and intensities of masks disposed before and behind the mask which is outputting the maximum intensity, which is the claimed locus of points).

b. As applied to Claim 2, which is representative of claims 7 and 12, Aoyama discloses the edge detection algorithm is a user defined edge detection algorithm that is tailored to the application (column 4, lines 25-46, the edge detecting process in Aoyama is user-defined since the angles can be varied according to users).

c. As applied to Claim 3, which is representative of claims 8 and 13, Aoyama discloses the selecting step includes the step of selecting intensity vs. pixel information in a plurality of directions in the vicinity of an edge of the image shape (Aoyama at column 4, lines 43-64, figure 4, selecting steps includes information in a plurality of directions which can be seen in Aoyama, there are 22a to 22n edge detecting masks due to angle variations).

d. As applied to Claim 4, which is representative of claims 9 and 14, Aoyama discloses the selecting steps includes the step of selecting intensity vs. pixel information in at

least four direction (Aoyama discloses it can be n edge detecting masks as the scanning angle increases at column 4, lines 44-45).

e. As applied to Claim 5, which is representative of claim 10 and 15, Aoyama discloses at least one direction is normal to the approximate edge location (Aoyama discloses the angle can vary as a user desires, and there can be as many as n edge detecting masks. Therefore, at least one direction is normal to the approximate edge location).

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5397 for regular communications and (703) 305-5397 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Tom Y. Lu
December 23, 2002

LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600